

## REMARKS

Claims 1-44, 57-59, and 62 were presented and examined. In response to the Final Office Action, claims 1, 15, 18, 20-22, 35-37, 44, 57, 59 and 62 are amended. No claims are cancelled or added. Claims 45-56 and 60-61 were previously cancelled. Applicants respectfully request reconsideration in view of the following remarks.

### **I. Claims Rejected Under 35 U.S.C. § 102**

**Claims 1-5, 14-17, 19-21, 37-42, 44, and 62** are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2004/0146056 filed by Martin (“Martin”).

Claim 1, as amended, recites the elements of “transmitting the pair of time-stamp request packets to two consecutive hops on the end-to-end path,” “generating a first time-stamp at a first hop of the two consecutive hops and a second time-stamp at a second hop of the two consecutive hops, in response to the pair of time-stamp request packets”, and “processing the first time-stamp and the second time-stamp to produce at least one QoS estimate of a link that couples the two consecutive hops on the end-to-end path” (emphasis added). Support for the amendments may be found, for example, in paragraphs [0058]-[0060] of the Specification and Figure 5.

Martin fails to teach or suggest these cited elements. Martin discloses sending echo reply control messages between network entities. However, Martin fails to teach or suggest sending and responding to echo reply control messages in the manner recited in amended claim 1. (*See* Martin, paragraph [0004].) The Examiner asserts that Martin’s router “may send multiple timer packets and therefore the limitation of generating a pair of time stamp request packets is met.” (*See* Office Action, page 14.) However, the assertion of what Martin’s router may or may not do is pure speculation and cannot establish a *prima facie* case of anticipation. There is no specific indication in Martin that time-stamps generated at two consecutive hops are used to produce at least one QoS estimate of a link that couples the two consecutive hops. Consequently, for at least these foregoing reasons, Martin fails to teach each element in amended claim 1. Accordingly reconsideration and withdrawal of the rejection of claim 1 is respectfully requested.

With respect to independent claims 20, 21, 37, 44 and 62, these claims have been amended to recite analogous elements to those in amended claim 1. Thus, for at least the

previous reasons discussed in connection with amended claim 1, Martin fails to teach each element in amended claims 1, 20, 21, 37, 44 and 62, as well as their respective dependent claims.

The Examiner has not specifically indicated the grounds on which independent claims 57 and 59 are rejected. However, based on the Office Action at page 5, it is presumed that these claims are rejected under 35 U.S.C. § 102(e) as being anticipated by Martin. Applicants amend independent claims 57 and 59 to recite analogous elements to those in amended claim 1. Thus, for at least the previous reasons discussed in connection with amended claim 1, Martin fails to teach each element in amended claims 57 and 59. Accordingly reconsideration and withdrawal of the rejection of claims 1-5, 14-17, 19-21, 37-42, 44, 57, 59 and 62 is respectfully requested.

## **II. Claims Rejected Under 35 U.S.C. § 103**

**Claims 6 and 11** are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of U.S. Publication No. 2004/0210632 filed by Carlson, et al. (“Carlson”).

Claims 6 and 11 depend on base claim 1 and incorporate the limitations thereof. Therefore, in view of at least the reasons discussed in connection with claim 1, Martin fails to teach or suggest each element of claims 6 and 11. In addition, Carlson fails to teach or suggest the amended limitations of claim 1. The Examiner has not cited and Applicants are unable to discern the section of Carlson that teaches or suggests the missing elements in claim 1. Thus, claims 6 and 11 are patentable over the cited art because of their dependencies on claim 1. Accordingly, reconsideration and withdrawal of the rejection of claims 6 and 11 is respectfully requested.

**Claims 7-10** are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of U.S. Publication No. 2003/0152034 filed by Zhang, et al. (“Zhang”).

Claims 7-10 depend on base claim 1 and incorporate the limitations thereof. Therefore, in view of at least the reasons discussed in connection with claim 1, Martin fails to teach or suggest each element of claims 7-10. In addition, Zhang fails to teach or suggest the amended limitations of claim 1. The Examiner has not cited and Applicants are unable to discern the section of Zhang that teaches or suggests the missing elements in claim 1. Thus, claims 7-10 are

patentable over the cited art because of their dependencies on claim 1. Accordingly, reconsideration and withdrawal of the rejection of claims 7-10 are respectfully requested.

**Claims 12 and 13** are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view U.S. Patent No. 7,068,677 issued to Arai, et al. (“Arai”).

Claims 12 and 13 depend on base claim 1 and incorporate the limitations thereof. Therefore, in view of at least the reasons discussed in connection with claim 1, Martin fails to teach or suggest each element of claims 12 and 13. In addition, Arai fails to teach or suggest the amended limitations of claim 1. The Examiner has not cited and Applicants are unable to discern the section of Arai that teaches or suggests the missing elements in claim 1. Thus, claims 12 and 13 are patentable over the cited art because of their dependencies on claim 1. Accordingly, reconsideration and withdrawal of the rejection of claims 12 and 13 is respectfully requested.

**Claims 18 and 43** are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of U.S. Publication No. 2003/0040320 filed by Lucidarme, et al. (“Lucidarme”).

Claims 18 and 43 depend on base claims 1, 22 or 37 and incorporate the limitations thereof. Therefore, in view of at least the reasons discussed in connection with claims 1, 22 and 37, Martin fails to teach or suggest each element of claims 18 and 43. In addition, Lucidarme fails to teach or suggest the amended limitations of claims 1, 22 or 37. The Examiner has not cited and Applicants are unable to discern the section of Lucidarme that teaches or suggests the missing elements in claims 1, 22 and 37. Thus, claims 18 and 43 are patentable over the cited art because of their dependencies on claims 1, 22 or 37. Accordingly, reconsideration and withdrawal of the rejection of claims 18 and 43 is respectfully requested.

**Claims 22-32 and 34** are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of U.S. Publication No. 2004/0025018 filed by Haas, et al. (“Haas”).

Independent claim 22 is amended to recite the elements of “sending the time-stamp request packet to at least one respective hop on the end-to-end path, the at least one time-stamp request packet having an origination address of the origination node spoofed to that of another hop on the network” (emphasis added). The amendment more clearly points out that the origination address of the origination node in the time-stamp request packet is spoofed to that of

another hop on the network. Support for the amendment can be found, for example, at paragraph 33 of the specification.

The Examiner has conceded that Martin fails to teach or suggest these elements. Moreover, the portion of Haas cited by the Examiner fails to teach or suggest these cited elements. Although Haas discloses “an adversary that can spoof a data link address,” it is understood that Haas teaches spoofing **in relation to a malicious route error message** instead of “the time-stamp request packet,” as recited in claim 22. Further, Haas discloses that “[r]oute error messages **do not include a MAC**,” and “[t]his allows an adversary that can spoof a data link address and lies within hop [*sic*] of an end-to-end data flow (route) **to inject a route error**” (emphasis added). See Haas, paragraph [0095]. Haas discloses that the MAC is a hashed field that includes “the entire IP header,” which a skilled artisan would understand to include **an IP source address**. See Haas, paragraph [0070]. Because Haas teaches that the malicious route error message **fails to include a MAC** (i.e., an IP header including an IP source address), the injection of a malicious route error message would not have “an origination address of the origination node spoofed to that of another hop on the network,” as recited in amended claim 22. As a result, Haas fails to teach or suggest each element in claim 22. Therefore, for at least the reasons set forth above, Martin in view of Haas fails to teach or suggest each element in claim 22. Accordingly reconsideration and withdrawal of the rejection of claim 22 is respectfully requested.

Claims 23-32 and 34 depend on base claim 22 and incorporate the limitations thereof. Therefore, in view of at least the reasons discussed in connection with claim 22, Martin in view of Haas fails to teach or suggest each element of claims 23-32 and 34. Thus, claims 23-32 and 34 are patentable over the cited art because of their dependencies on claim 22.

The Examiner has not specifically indicated the grounds on which independent claims 35 and 36 are rejected. However, based on the Office Action at page 10, it is presumed that these claims are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of Haas. Applicants amend independent claims 35 and 36 to recite analogous elements to those in amended claim 22. Thus, for at least the previous reasons discussed in connection with amended claim 22, Martin in view of Haas fails to teach or suggest each element in amended claims 35 and

36. Accordingly, reconsideration and withdrawal of the rejection of claims 23-32 and 34-36 is respectfully requested.

**Claim 33** is rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of Haas, and further in view of Lucidarme.

Claim 33 depends from amended claim 22 and incorporates the limitations thereof. Thus, for at least the reasons discussed in connection with amended claim 22, Martin fails to teach or suggest each element of claim 33. In addition, Lucidarme fails to teach or suggest the missing elements in amended claim 22. The Examiner has not cited and Applicants are unable to discern the portion of Lucidarme that allegedly teaches or suggests the missing elements in amended claim 22. As a result, the cited art fails to teach or suggest each element in claim 33 because of its dependency on amended claim 22. Accordingly reconsideration and withdrawal of the rejection of claim 33 is respectfully requested.

**Claim 58** is rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of U.S. Publication No. 2007/0233946 filed by Jewett, et al. ("Jewett").

Claim 58 depends from amended claim 57 and incorporates the limitations thereof. Thus, for at least the reasons discussed in connection with amended claim 57, Martin fails to teach or suggest each element of claim 58. In addition, Jewett fails to teach or suggest the missing elements in amended claim 57. The Examiner has not cited and Applicants are unable to discern the portion of Jewett that allegedly teaches or suggests the missing elements in amended claim 57. As a result, the cited art fails to teach or suggest each element in claim 58 because of its dependency on amended claim 57. Accordingly reconsideration and withdrawal of the rejection of claim 57 is respectfully requested.


### CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (408) 720-8300.

Respectfully submitted,

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